

REMARKS

Re-examination and allowance of the present application is respectfully requested.

Initially, Applicant thanks the Examiner for indicating his consideration of the documents cited in the Information Disclosure Statements that were filed in this application on December 30, 2003; October 28, 2003; May 19, 2003; and March 17, 2003.

Applicant respectfully traverses the 35 U.S.C. §103(a) rejection of claims 2, 4, 5, 9 and 10 as being unpatentable over U.S. Patent 5,852,655 to McHALE et al., hereinafter McHALE, in view of U.S. Patent 5,844,894 to DENT.

According to a feature of the Applicant's invention, a particular xDSL modulation transmission protocol (such as, but not limited to, for example, VDSL) is selected from among a plurality of different (dissimilar) xDSL modulation transmission protocols (such as, but not limited to, for example, ADSL, VDSL, HDSL, FDSL). Specifically, an initiating communication device transmits first negotiation information bits that represent a first list of xDSL modulation transmission protocol capabilities that are supported by the initiating communication device, such as, but not limited to, for example, HDSL, ADSL, VDSL and SDSL. Referring to page 77 and Tables 37 and 38 of Applicant's specification, the negotiation information bits include octet SPar(1)s, which is always transmitted, that identify the various supported xDSL modulation transmission protocol capabilities and their respective support. Each parameter in the octet is assigned a unique bit position, with a

binary "1" being assigned when that parameter is valid (supported). In the disclosed embodiment (see Table 38), SPar(1) is coded such that bit position 1 represents the support/non-support of HDSL, bit position 2 represents the support/non-support of VDSL Annex a, and bit position 3 represents the support/non-support of VDSL Annex B. Thus, when bit positions 1 and 2 of SPar(1) are set to "1", the negotiation information bits transmitted by the negotiation data transmitter of the initiating communication device represent a first list indicating that xDSL modulation transmission protocols for HDSL and VDSL Annex a are supported, but that xDSL modulation transmission protocol VDSL Annex B is not supported.

The responding communication device replies by transmitting its (e.g., second) negotiation information bits that represent a second list of xDSL modulation transmission protocol capabilities it (e.g., the responding communication device) supports, such as, for example, FDSL and VDSL. A selector then selects an xDSL modulation transmission protocol that is common to (supported by) both the initiating communication device and the responding communication device (e.g., included in both the first and second lists of xDSL modulation transmission protocol capabilities), such as, but not limited to, for example, VDSL in the present discussion, to establish a communication channel between the initiating and responding communication devices. Applicant submits that this procedure is neither disclosed or suggested by McHALE or DENT, either singularly or in combination.

Applicant submits that at least the above discussed feature is neither disclosed or suggested by McHALE, which is directed to serving a large number of communication lines with a smaller number of modems.

In rejecting the claims of the instant invention, the Examiner asserts that Fig. 3 of McHALE discloses first and second negotiation bits representing dissimilar xDSL modulation transmission protocol capabilities. Applicants respectfully submit that this assertion by the Examiner is erroneous, and that McHALE in fact discloses that all the modems are of the same modulation transmission protocol.

McHALE discloses how a large number, for example 1,000, communication lines (e.g., telephone lines) are monitored using a smaller number, for example 100, modems in order to determine which modem is available. Applicant submits that each and every modem in McHALE is of the same communication protocol (such as, for example, ADSL).

Column 7, lines 60-64 of McHALE indicates that “[t]he format of signals on data lines 54 and output lines 72 is the same as the format of signals on subscriber lines 16”. Based on this disclosure, Applicant submits that the modems employed in McHALE are all of the same communication protocol.

Column 8, lines 24-31 specifies that a need for service on a selected data line 54 is determined by detecting current voltages, electrical tones, data link frames or packets. There is no teaching or suggestion in McHALE of detecting the specific type of modem.

Accordingly, Applicant submits that an additional ground exists for concluding that all the modems of McHALE are of the same communication protocol.

Column 9, line 66 through column 10, line 9 of McHALE discloses that subscriber table 126 of McHALE stores subscriber information, such as, for example, connect time, session duration, session activity logs, etc. that can be used to generate billing and demographic data on subscribers 12 in system 10. McHALE is totally silent with respect to indicating that the subscriber table 126 stores information representing what type of xDSL communication protocol is used. Applicant submits that such information is not required because all of the modems are of the same type (e.g., communication protocol). Since all the modems in the system of McHALE are of the same type (e.g., all the modems are, for example, ADSL modems), Applicant submits that there is no need for McHALE to store information on the type of modem that is used.

Column 14, lines 41-58 of McHALE describes the manner in which the need for service is detected with reference to Fig. 8. At step 312, a need for service is performed, at a low level, such as a verification of a checksum or detection of an incomplete transmission, or at a higher level, such as a verification of an identifier, password, or other security information that provides access to communication server 58. Thereafter, an unused modem is selected at step 332, and processor 116 generates a command that directs switch 70 to couple the selected data line 54 to the selected modem 160 at step 333. There is no

disclosure or suggestion of detecting the modulation of the communication protocol. Thus, Applicant submits that an additional ground exists for concluding that all of the modems in McHALE are of the same communication protocol.

Applicant submits that McHALE is silent with respect to transmitting first negotiation information bits representing a first list of xDSL modulation transmission protocol capabilities that are supported by the initiating communication device, receiving second negotiation information bits that represent a second list of xDSL modulation transmission protocol capabilities that are supported by a responding communication device, and selecting an xDSL modulation transmission protocol from the first and second lists that is common to both the initiating communication device and the responding communication device. Applicant submits that this procedure is not disclosed or suggested by McHALE, because all of the modems employed in McHALE are of the same type (e.g., same communication protocol).

Applicant submits that DENT fails to disclose that which is lacking in McHALE. Specifically, Applicant submits that DENT fails to disclose or suggest that an initiating communication device transmits first negotiation information bits that represent a first list of xDSL modulation transmission protocol capabilities that are supported by the initiating communication device; that a responding communication device replies by transmitting second negotiation information bits that represent a second list of xDSL modulation

transmission protocol capabilities supported by the responding communication device; and that the initiating communication device selects an xDSL modulation transmission protocol that is common to both the initiating communication device and the responding communication device. Accordingly, Applicant submits that even if one attempted to combine the teachings of McHALE and DENT in the manner suggested by the Examiner, one would fail to arrive at the instant invention, as such a combination would fail to include the selection of an xDSL modulation transmission protocol that is common to the first and second lists of xDSL modulation capabilities.

Further, Applicants respectfully traverse the Examiner's assertion that DENT discloses the transmission of at least one carrier that contains data related to a useable frequency spectrum allocation system. In setting forth this assertion, the Examiner refers Applicant to the Abstract of DENT. Applicant has reviewed the Abstract of DENT, and submits that it does not teach or suggest the transmission of at least one carrier that contains data related to a useable frequency spectrum allocation system. Applicant submits that the frequency allocation system of DENT is related to a synchronized time slot, and not a carrier. Accordingly, Applicant submits that an additional ground exists for concluding that the combination of McHALE and DENT, in the manner suggested by the Examiner, does not result in Applicant's invention.

By the current amendment, Applicant amends the claims to clarify that the first and

second negotiation information bits represent first and second lists of xDSL modulation transmission capabilities, respectively, and that an xDSL modulation transmission protocol is selected that is common to both the initiating and responding communication devices.

In view of the above, Applicant submits that the present invention, as defined by the pending claims, is distinguishable from the prior art combination set forth by the Examiner. Accordingly, Applicant submits that the ground for the 35 U.S.C. §103 rejection of the claims no longer exist, and respectfully request that this ground of rejection be withdrawn.

Further, Applicant notes that DENT is directed to CDMA/TDMA radiotelephones, and submits that such technology is non-analogous art to Applicant's xDSL technology. Applicant submits that one skilled in the art of xDSL communications would not look to the art of radiotelephones for solutions for a xDSL communication system. Indeed, the teachings of DENT are completely irrelevant to xDSL systems.

Further, a CDMA/TDMA scheme for a radiotelephone system allocates frequencies over space (see, for example, Fig. 5A of DENT). Such systems are concerned with how to find frequencies for each cell to get the most use from the system. As taught by DENT, frequencies are juggled for each cell, so as to maximize the use over time. Thus, as more callers enter a particular cell, frequencies are moved from one cell to another cell to handle the increased demands of the particular cell. Such radiotelephone systems do not employ carriers as are employed in xDSL communications. Furthermore, radiotelephone systems do

not employ a handshake scheme to determine useable frequencies. Frequencies usable between radiotelephone 21 and base stations 23 are not handshaked between the radiotelephone 21 and base stations 23, instead they are informed to base stations 23 from MTSO 25.

In view of the above, Applicant submits that DENT is non-analogous art, that the techniques applicable to radiotelephones are so different from the techniques applicable to xDSL communications that one skilled in the art of xDSL systems would not look to radiotelephones for solutions, and thus, it is erroneous of the Examiner to attempt to employ the teachings of radiotelephone systems to solve problems related to xDSL communications. Accordingly, Applicant submits that DENT is an inappropriate reference.

SUMMARY AND CONCLUSION

In view of the fact that none of the art of record, whether considered alone or in combination, discloses or suggests the present invention as now defined by the pending claims, and in further view of the above amendments and remarks, reconsideration of the Examiner's action and allowance of the present application are respectfully requested and are believed to be appropriate.

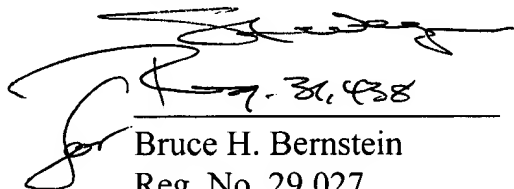
Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should

be deemed to attach thereto.

Should the Commissioner determine that an extension of time is required in order to render this response timely and/or complete, a formal request for an extension of time, under 37 C.F.R. §1.136(a), is herewith made in an amount equal to the time period required to render this response timely and/or complete. The Commissioner is authorized to charge any required extension of time fee under 37 C.F.R. §1.17 to Deposit Account No. 19-0089.

If there should be any questions concerning this application, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,
Stephen PALM



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GREENBLUM & BERNSTEIN, P.L.C.
1950 Roland Clarke Place
Reston, VA 20191
(703) 716-1191